

We claim:

1. A process for the production of a purified refolded monomeric bone morphogenetic factor which comprises subjecting an inclusion body of a bone morphogenetic factor to the following steps a) - c) in order, thereby producing the refolded monomeric bone morphogenetic factor;
 - a) introducing a polynucleotide encoding a bone morphogenetic factor into a bacterium, expressing said bone morphogenetic factor in the form of an inclusion body, recovering said inclusion body and treating it with a denaturing agent to obtain a solubilized monomer,
 - b) treating the solubilized monomer directly with a refolding solution to obtain a refolded monomeric bone morphogenetic factor,
 - c) subjecting the refolded monomeric bone morphogenetic factor to purification.
2. The process for the production according to claim 1, wherein said bacterium is Escherichia coli.
3. The process of claim 1, wherein the refolding solution has a final concentration of the denaturing agent between 1 M and 4 M.
4. The process for the production according to claim 1, wherein said refolding solution comprises cysteine or salt thereof, bone morphogenetic factor at a final concentration above 1.0 mg/mL, sodium chloride at a final concentration of 0.1 to 1.5 M, and cholic acid or its derivatives at a final concentration of 5 to 100 mM and has a pH in the range of 8 - 10.
5. The process for the production according to claim 4, wherein said refolding solution is further comprising a compound having a guanidino group or the salt thereof.
6. The process for the production according to claim 1, wherein said bone morphogenetic factor is a bone morphogenetic factor selected from the group consisting of MP52, BMP-2, BMP-4, BMP-6, BMP-7, BMP-12 and BMP-13.
7. The process of claim 1 wherein the refolded monomeric bone morphogenetic factor is purified by ultrafiltration, isoelectric precipitation

and reverse phase chromatography.

8. The process of claim 1 wherein the inclusion body is washed with a detergent or denaturing agent prior to solubilization of the bone morphogenetic factor.
9. Use of an active refolded monomeric bone morphogenetic factor obtained according to the process of claim 1.
10. Use of an active refolded dimeric bone morphogenetic factor obtained according to the process for the production of a purified refolded dimeric bone morphogenetic factor which comprises subjecting an inclusion body of a bone morphogenetic factor to the following steps a) - c) in order, thereby producing the refolded dimeric bone morphogenetic factor;
 - a) introducing a polynucleotide encoding a bone morphogenetic factor into a bacterium, expressing said bone morphogenetic factor in the form of an inclusion body, recovering said inclusion body and treating it with a denaturing agent to obtain a solubilized monomer,
 - b) treating the solubilized monomer without purification directly with a refolding solution in a final protein concentration above 1 mg/ml to obtain a refolded dimeric bone morphogenetic factor,
 - c) subjecting the refolded monomeric bone morphogenetic factor to purification.